

FINAL REPORT

Grant #: N00014-93-1-0491

PRINCIPAL INVESTIGATOR: Dr. Ralph S. Quatrano

INSTITUTION: University of North Carolina, Chapel Hill

GRANT TITLE: Molecular Interactions at Marine Interfaces (MIMI): A Workshop

REPORTING PERIOD: 20 April 1993 - 22 April 1993

AWARD PERIOD: 14 April 1993 - 14 April 1994

OBJECTIVE: To bring together principal investigators in the MIMI program to discuss the different approaches and systems being used to study the physical and biological interfaces in the marine environment, with the goal of understanding the molecular basis that govern these interactions.

APPROACH: Approximately thirty (30) investigators were invited to attend a two-day workshop at the University of North Carolina at Chapel Hill to: (1). introduce all of the program members to each other, (2). make all participants aware of the scope and directions of the individual efforts, (3). establish appropriate collaborations early in the program, (4). ensure that lines of communications between P.I.'s are established early to foster future efforts and collaborations, and (5). to introduce all program members to the ONR management team

ACCOMPLISHMENTS: Thirty P.I.'s were assembled on the night of April 20, 1993 to cover the schedule which included 30 minute talks on April 21 and April 22. Local expenses including meeting location (Friday Center, Chapel Hill) and meals were covered by this award. Travel and lodging for April 20 and 21 were provided by the individual P.I. awards. Each P.I. presented a 20 minute talk followed by a 10 minute discussion of the approach and system each was using to study the molecular basis of marine interfaces. Coffee breaks, breakfasts, lunches and dinners were all held for the group so that discussions could extend beyond the more formal presentations. Considerable effort was made by all P.I.'s to provide the basic information for widespread understanding since the fields represented included organic chemistry, biochemistry, molecular biology, marine physiology and ecology and cell biology. Several groups were able to make contacts that served to provide interaction throughout their granting periods, most notable being the P.I.'s that studied marine macroalgae. Also, some preliminary attempts were made to link polymer chemists with molecular biologists to determine if surface structures on biological organisms might be mimicked in surface films. All involved looked forward to the next meeting and agreed that it is at the interfaces of disciplines in which the greatest advances are made in understanding these complex questions.

SIGNIFICANCE: Interaction of scientists in different disciplines all focused on a common problem will aid in our general understanding of the molecular basis of marine interfaces, and hopefully may help to devise a novel strategy for control of critical problems such as biofouling. Also, macromolecules with unique adhesive properties in a marine environment may be identified.

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13. ABSTRACT Approximately 30 investigators were invited to attend a two-day workshop at the University of North Carolina at Chapel Hill to: (1). introduce all of the program members to each other, (2). make all participants aware of the scope and directions of the individual efforts, (3). establish appropriate collaborations early in the program, (4). ensure that lines of communications between P.I.'s are established early to foster future efforts and collaborations, and (5). to introduce all program members to the ONR management team. Each P.I. presented a 20 minute talk followed by a 10 minute discussion of the approach and system each was using to study the molecular basis of marine interfaces. All meals and breaks were provided for the group so that discussions could extend beyond the more formal presentations. Considerable effort was made by all P.I.'s to provide the basic information for widespread understanding since the fields represented included organic chemistry, biochemistry, molecular biology, marine physiology and ecology and cell biology. These interactions will aid in our general understanding of the molecular basis of marine interfaces, and may lead to design a novel strategy for control of biofouling and the identification of macromolecules with unique adhesive properties in a marine environment.				
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Dear Dr. Quantrano:

This is to inform you that a copy of your Final Technical Report on ONR grant N00014-93-1-0491 which ended 14 April 1994 is needed for our files. It should also be noted that a Final Report will be due for In order to close out your grant, the report described below is requested. Because this report will be published by ONR, it should be produced using the format indicated by the enclosed Mendel sample and should summarize the significant results acquired during the entire period of support in 4 pages or less. It should also provide a listing of all journal articles, books, book chapters and published abstracts, including those submitted or in preparation, supported totally or in part by the ONR grant. Related patents issued or applied for should also be listed. Any honors received during the period of your ONR-sponsored research by you and other individuals supported by the grant should also be described. This report is a formal, public record of your achievements under your ONR grant and should receive your careful attention. We apologize for the delay in requesting this report. If you have previously submitted a final technical report, please provide me with another copy.

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20375

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We thank you for your participation in ONR research programs and congratulate you on your contribution to Navy science.

Sincerely,



HAROLD E. GUARD, Ph. D.
Director
Biomolecular and Biosystems
Science and Technology Division

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